

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
23 December 2004 (23.12.2004)

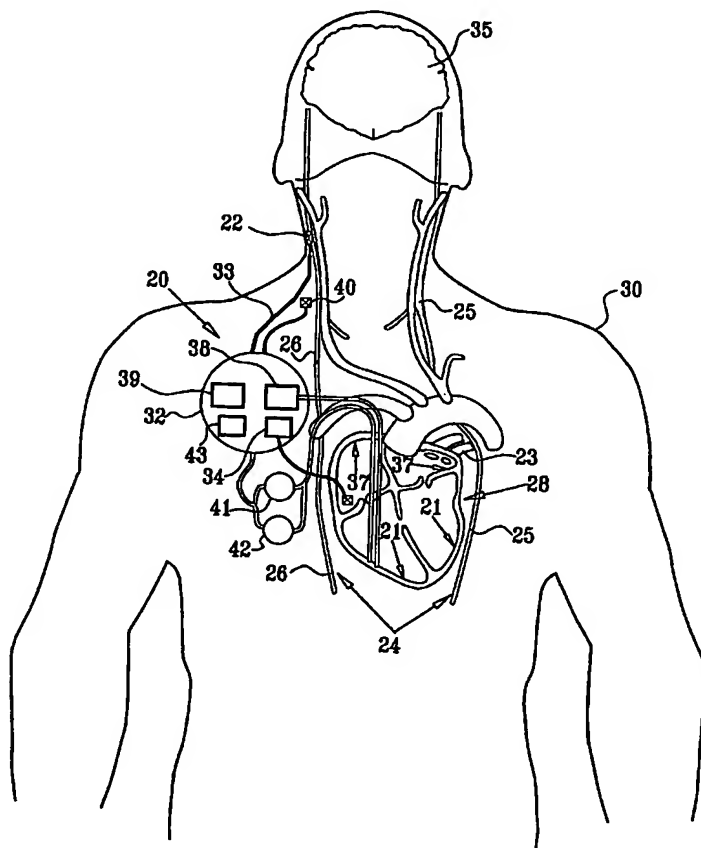
PCT

(10) International Publication Number
WO 2004/110550 A2

- (51) International Patent Classification⁷: **A61N**
- (21) International Application Number: **PCT/IL2004/000496**
- (22) International Filing Date: **10 June 2004 (10.06.2004)**
- (25) Filing Language: **English**
- (26) Publication Language: **English**
- (30) Priority Data: -
60/478,576 13 June 2003 (13.06.2003) US
10/461,696 13 June 2003 (13.06.2003) US
- (63) Related by continuation (CON) or continuation-in-part (CIP) to earlier application:
US 10/461,696 (CIP)
Filed on 13 June 2003 (13.06.2003)
- (71) Applicant (for all designated States except US): **BIO-CONTROL MEDICAL LTD.** [IL/IL]; 3 Giron Street, 56100 Yehud (IL).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): **BEN EZRA**, Omry [IL/IL]; 23 Tura Street, 94102 Jerusalem (IL). **COHEN**, Ehud [IL/IL]; 8 HaCarmel Street, 55900 Ganei Tikva (IL). **BEN DAVID**, Tamir [IL/IL]; 15 Mordechai Zaira, 69624 Tel Aviv (IL).
- (74) Agents: **SANFORD T. COLB & CO.** et al.; P.O. Box 2273, 76122 Rehovot (IL).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,

[Continued on next page]

(54) Title: **VAGAL STIMULATION FOR ANTI-EMBOLIC THERAPY**



(57) Abstract: Apparatus (20) for treating a subject (30) suffering from spontaneous atrial fibrillation includes an electrode device (22), adapted to be coupled to a site of the subject (30) selected from the list consisting of: a vagus nerve (24) of the subject (30), an epicardial fat pad of the subject (30), a pulmonary vein of the subject (30), a carotid artery of the subject (30), a carotid sinus of the subject (30), a vena cava vein of the subject (30), and an internal jugular vein of the subject (30), and a control unit (32), adapted to drive the electrode device (22) to apply an electrical current to the site, and to configure the current to maintain the spontaneous AF for at least about 24 hours, so as to modify blood flow within the atria and reduce risk of thromboembolic events.

WO 2004/110550 A2



PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,
TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW.

SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ,
GW, ML, MR, NE, SN, TD, TG).

(84) **Designated States** (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI,

Published:

— *without international search report and to be republished upon receipt of that report*

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.